ABSTRACT:

A known encoder 100 comprises a segmentation unit 110 for segmenting an audio or speech signal s into at least one segment x(n) and a calculation unit 120 for calculating sinusoidal code data in the form of frequency and amplitude data of a given extension $\hat{x}(n)$ from the segment x(n) such that the extension $\hat{x}(n)$ approximates the segment x(n) as good as possible for a given criterion. It is the object of the invention to improve the known encoder such that the calculation of said sinusoidal code data can be carried out in a simpler and cheaper way. This object is solved according to the invention by calculating the sinusoidal code data $\theta_k^i$, $d_j^i$ and $e_j^i$ for the segment x(n) according to the following extension $\hat{x}$:

$$\hat{x} = \sum_{i=1}^{L} \sum_{j=0}^{J-1} \left[ d_j^i f_j(n) \cos(\Theta'(n)) + e_j^i f_j(n) \sin(\Theta'(n)) \right].$$

Fig. 1.